MINENKO, V.I., PETROV, S.M., IVANOVA, M.S.

Characteristics of molten lead oxide-silica glasses. Stek. i ker. 17 no.6:34-37 Je '60. (MIRA 13:6)
(Glass)

S/073/60/026/002/007/015
B023/B067

AUTHORS: Minenko, V. I., Petrov, S. M., and Kirilenko, L. F.

TITLE: Study of the System PbO - SiO_2 by the Method of Electromotive Forces

PERIODICAL: Ukrainskiy khimicheskiy zhurnal, 1960, Vol. 26, No. 2, pp. 195-197

TEXT: The authors studied the PbO - SiO_2 system by the emf method at 940°C in a concentration range where this system is homogeneous. Concentration chains $Pt/PbO(c_1) + SiO_2/Al_2O_3/SiO_2 + PbO(c_2)/Pt$ were studied. A eutectic with the following composition served as standard melt: 29.6 wt% SiO_2 and 70.4 wt% PbO. The data obtained proved the dependence of emf on the composition. In the melts of the PbO - SiO_2 system corresponding to the formulas $4PbO \cdot SiO_2$, $2PbO \cdot SiO_2$, $PbO \cdot SiO_2$, and $2PbO \cdot 3SiO_2$, the authors observed sudden changes of emf. This indicates that four types of

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Study of the System PbO - SiO_2 by the Method of Electromotive Forces

S/073/60/026/002/007/015
B023/B067

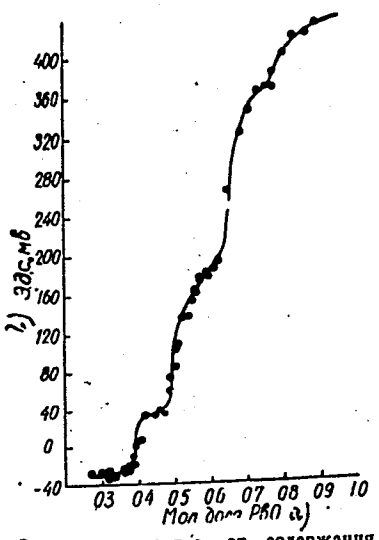
ionic complexes are present in these melts. On the basis of the values obtained for sudden changes of emf, the authors note that the compounds corresponding to the formulas $2PbO \cdot SiO_2$, $PbO \cdot SiO_2$, and $2PbO \cdot 3SiO_2$ are sufficiently stable, whereas the stability of the complex corresponding to the formula $4PbO \cdot SiO_2$ was low under the experimental conditions. A figure illustrates the dependence of emf on the PbO content in the system PbO - SiO_2. Legend to the figure: a) molar fraction of PbO; b) emf expressed in mv. There are 1 figure and 14 references: 11 Soviet and 3 US.

ASSOCIATION: Khar'kovskiy inzhenerno-ekonomicheskiy institut, laboratoriya fizicheskoy khimii (Khar'kov Institute of Management Engineers, Laboratory of Physical Chemistry)

SUBMITTED: December 15, 1958

Card 2/3

S/073/60/026/002/007/015
B023/B067



Зависимость э. д. с. от содержания PbO в системе PbO — SiO_2.

Card 3/3

MINENKO, V.I.; PETROV, S.M.; IVANOVA, N.S.

Properties of the melts of the PbO - SiO_2 system as studied by the electromotive force method at 1200°C. Izv.vys.ucheb.zav.; khim.i khim.tekh. 4 no.1:3-6 '61. (MIRA 14:6)

1. Khar'kovskiy inzhenerno-ekonomicheskiy institut, kafedra obshchey khimii.

(Lead oxide) (Silica)

S/076/61/035/007/013/019
B127/B208

AUTHORS: Minenko, V. I., Petrov, S. M., and Ivanova, N. S.

TITLE: The behavior of a platinum electrode in silicate melts

PERIODICAL: Zhurnal fizicheskoy khimii, v. 35, no. 7, 1961, 1534-1537

TEXT: The purpose of this study was to design an electrode for investigating melts containing oxides of various metals, since the errors of previous methods were 10-15%. The platinum electrode was tested in concentration cells of the type Pt,$O_2(P_{O_2})$ (melt I),$|Al_2O_3|$(melt II) $O_2(p'_{O_2})$, Pt with the electrolytes $PbO-SiO_2$, $Na_2O-CaO-SiO_2$ and $MeO-PbO-SiO_2$, MeO being oxides of the alkaline earth group. A reaction of the following type was assumed in each case: $2\,O^{2-} = O_2 + 4e$. The dependence of the potential of the platinum electrode on the activity of the oxygen ions may be expressed by the formula: $\pi = A-B \log a_{O^{2-}}$. The quantity n in the relation

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The behavior of a platinum...

B=2.303 RT/nF was about 4 in all cases. The emf of the cell: $Pt,O_2(p_{O_2} = 0.21\ at)|PbO\ (70.4\ wt\ \%) + SiO_2(29.6\ wt\%)\ |Al_2O_3|SiO_2(100-x\ wt\%) + PbO\ (x\ wt\%)|O_2(p'_{O_2} = 0.21\ at)$, pt as a function of the logarithm of the molar content of PbO ($1+\log N_{PbO}$) in the system 4 $PbO.SiO_2$-PbO at 490°C is given by a straight line. At 1000°C the emf of the cells is also a linear function of ($1+\log p_{O_2}$). By increasing the partial pressure p'_{O_2} the potential becomes more positive and $\pi=A'+B'\log p'_{O_2}$ holds, where $A'=A-B\log a_{O^{2-}}$, B'=2.303 RT/nF. The following reactions take place at the electrode: $O_2(gas) \rightleftarrows 2\ O_{(Pt)} \rightleftarrows 2\ O^{2-}_{(Pt)} \rightleftarrows 2\ O^{2-}_{(melt)}$. The first process depends on the O_2 pressure in the gaseous phase, the second on the electrode surface, the third on the activity of the oxygen ions in the melt. The potential of

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the platinum electrode is determined by $\pi = A - B \log a_{O^{2-}} + B' \log p'_{O_2}$.

There are 3 figures and 6 references: 3 Soviet-bloc and 3 non Soviet-bloc. The most recent references to English-language publications read as follows: Ref. 2: S. N. Flengas et. al.: Canad. J. Chem. 35, 1254, 1957, Ref. 5: R. K. Edwards et. al.: J. Phys. Chem., 61, 255, 1957.

ASSOCIATION: Khar'kovskiy inzhenerno-ekonomicheskiy institut
(Khar'kov Engineering and Economical Institute)

SUBMITTED: September 5, 1959

Card 3/3

MINENKO, V.I.; PETROV, S.M.; IVANOVA, N.S.

Behavior of the platinum electrode in electrochemical studies of molten oxide mixtures. Zhur.fiz.khim. 36 no.10:2300-2302 O '62. (MIRA 17:4)

1. Khar'kovskiy inzhenerno-ekonomicheskiy institut, laboratoriya fizicheskoy khimii.

MINENKO, V.I.; IVANOVA, N.S.

Thermodynamic properties of molten lead silicates. Izv. vys. ucheb. zav.; tsvet. met. 6 no.3:64-69 63. (MIRA 16:9)

1. Khar'kovskiy inzhenerno-ekonomicheskiy institut, kafedra khimii.
(Lead silicates—Thermodynamic properties)

MINENKO, V.I., kand. tekhn. nauk; ROMAS'KO, S.D., kand. geologo-mineralogicheskikh nauk; BILYACH, L.I., inzh.

Crystal chemistry techniques for checking magnetic treatment of feed water. Teploenergetika 10 no.9:48-50 S '63. (MIRA 16:10)

1. Khar'kovskiy inzhenerno-ekonomicheskiy institut.
(Feed-water purification)

MINENKO, V.I.; IVANOVA, N.S.

Activity of lead oxide in melts of the PbO - SiO_2 system. Ukr. khim. zhur. 29 no.11:1160-1164 '63. (MIRA 16:12)

1. Khar'kovskiy inzhenerno-stroitel'nyy institut.

L 1590-66 EWP(e)/EPA(s)-2/EWT(m)/EWP(i)/ETC/EWG(m)/EPA(w)-2/T/EWP(b) DS/WH

ACCESSION NR: AP5020954 UR/0073/65/031/008/0804/0810

AUTHOR: Minenko, V. I.; Ivanova, N. S.; Fal'ko, I. K.

TITLE: Electrode functions of some oxide refractories

SOURCE: Ukrainskiy khimicheskiy zhurnal, v. 31, no. 8, 1965, 804-810

TOPIC TAGS: electrode, electrode potential, refractory oxide, magnesium oxide, zirconium compound

ABSTRACT: These materials can be utilized for membranes to be used as electrode with cathode or anode functions, similar to glass electrodes. The work deals with the study of the potential (EMF) of such membranes as a function of electrolyte composition and the possibility for using them in chemical or concentration cells as membranes having the function of a metallic electrode. Galvanic cells of the following types were studied:

PT, O_2/melt I/R_nO_m/ melt II/O_2, Pt (A)
Me/ melt/ O_2(P_{O_2} = 1 amp), Pt, (B)
Me/ melt II/ R_nO_m/ melt I/Me, (C)

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ACCESSION NR: AP5020954

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$$Me, [O] = a/R_nO_m/Me, [O] = x \quad (D)$$

$$Me/R_nO_m/\ melt/O_2(P_{O_2} = 1\ amp), Pt \quad (E)$$

where R_nO_m was made of MgO (addition 5-8% MgO. Al_2O_3), zirconium (addition 8-10% CaO), or aluminum (corundum). The additions were to serve as binders to increase the amount of ion-oxygen vacancies in the lattice and decrease the share of electron conductivity. Lead or other silicates were used as electrolytes. EMF was measured at 1213, 1273, 1373 and 1473 K, and stable EMF values were usually obtained after 20-30 minutes. Formulas are given for determining the function φ_n for such electrodes, and their applicability to the various cell systems is discussed. The metallic function of oxide refractories may be represented as a result not only of the activity of oxygen ions but also of cations. Cell E was the ideal type. Measurement data and calculations agreed satisfactorily and point toward the possibility of using magnesium and zirconium oxide membranes that separate the metal from the electrolyte as electrodes with metallic function, that is, their potential is determined by the ion activity of the given metal in the electrolyte. Orig. art. has: 6 formulas and 3 tables.

Card 2/3

L 1590-66

ACCESSION NR: AP5020954

3

ASSOCIATION: Khar'kovskiy inzhenerno-ekonomicheskiy institut (Khar'kov Institute of Engineering Economics)

SUBMITTED: 03Mar64 ENCL: 00 SUB CODE: MM, GC

NR REF SOV: 014 OTHER: 009

Card 3/3

MINENKO, V.I., kand.khim.nauk; PETROV,S.M.

Characteristics of practical application of magnetic water treatment. Bezop.truda v prom. 6 no.6:29-31 Je '62. (MIRA 15:11)

1. Khar'kovskiy inzhenerno-ekonomicheskiy institut.
(Feed-water purification)

MINENKO, V.I., kand.khimicheskikh nauk; ZLUNITSYN, S.A., kand.fiziko-matematicheskikh nauk; PETROV, S.M., kand.khimicheskikh nauk; ROMAS'KO, S.D., kand.geolog-mineralogicheskikh nauk

Concerning the effect of magnetic fields on the physical properties of water. Prom.energ. 17 no.5:24-26 My '62. (MIRA 15:5)
(Feed-water purification)

PCHELKO, I.G., red.; MINENKO, V.M., red.; ZARKH, I.M., tekhn. red.

[Materials of the Conference on Aviation Meteorology] Materialy Nauchnoi konferentsii po aviatsionnoi meteorologii. Pod red. I.G.Pchelko. Moskva, Gidrometeoizdat, 1963. 127 p. (MIRA 16:12)

1. Nauchnaya konferentsiya po voprosam aviatsionnoy meteorologii, Moscow, 1960.
(Meteorology in aeronautics)

BAYDIN, Sergey Stepanovich; MINENKO, V.M., red.; ZEMTSOVA, T.Ye., tekhn. red.

[Runoff and the levels of the Volga Delta]Stok i urovni del'ty Volgi. Moskva, Gidrometeoizdat, 1962. 336 p. (MIRA 16:2)
(Volga Delta--Runoff)

SIMONOV, A.I., otv. red.; MINENKO, V.M., red.

[Oceanographic tables for the Caspian Sea, Aral Sea and Sea of Azov] Okeanologicheskie tablitsy dlia Kaspiiskogo, Aral'skogo i Azovskogo morei. Moskva, Gidrometeoizdat 1964. 139 p. (MIRA 17:11)

1. Leningrad. Gosudarstvennyy gidrologicheskiy institut.

BELYAYEV, Igor', Petrovich; BAYDIN, S.S., kand. geogr. nauk, nauchn. red.; MINENKO, V.M., red.; ZARKH, I.M., tekhn. red.

[Hydrology of the Terek Delta] Gidrologiia del'ty Tereka. Pod red. S.S.Baidina. Moskva, Gidrometeoizdat, 1963. 207 p. (MIRA 16:12)

(Terek River--Delta)

SORKINA, Anna Il'inichna; TAUBER, G.M., otv. red.; MINENKO, V.M., red.; ZARKH, I.M., tekhn. red.

[Types of atmospheric circulation and associated wind fields over the northern part of the Pacific Ocean] Tipy atmosfernoi tsirkuliatsii i sviazannykh s nei vetrovykh polei nad severnoi chast'iu Tikhogo okeana. Moskva, Gidrometeoizdat (otd-nie), 1963. 247 p. (MIRA 16:6)
(Pacific Ocean--Winds)

ALMAZOV, A.M., doktor geogr. nauk; BONDAR, K.; VAGIN, N.F.; GEDERIM, V.; D'YAKONU, K.[Diacomu,C.]; MITSE,P.[Mitș,P.]; STENESKU,V.[Stanescu,V.]; STENESKU, S.[Stanescu,S.]; MAYSTRENKO, Yu.G.; MIKHAYLOV, V.N., kand. geogr. nauk; NIKIFOROV, Ya.D., kand.tekhn. nauk; RAY, I.A.; RODIONOV, N.A.; MINENKO, V.M., red.; ZARKH, I.M., tekhn. red.

[Hydrology of the region of the Danube estuary] Gidrologiia ust'evoi oblasti Dunaia. [By] A.M.Almazov i dr. Moskva, Gidrometeoizdat (otdelenie), 1963. 382 p. (MIRA 17:1)

1. Gosudarstvennyy okeanograficheskiy institut Glavnogo upravleniya gidrometeorologicheskoy sluzhby pri Sovete Ministrov SSSR (for Mikhaylov, Nikiforov, Rodionov).
2. Dunayskaya gidrometeorologicheskaya observatoriya Upravleniya gidrometeorologicheskoy sluzhby Ukr.SSR (for Vagin, Ray).
3. Institut gidrobiologii AN Ukr.SSR (for Almazov, Maystrenko).
4. Nauchno-issledovatel'skiy institut gidrotekhniki Komiteta vodnogo khozyaystva Rumynskoy Narodnoy Respubliki (for Bondar, Gederim, D'yakonu, Mitse,, Stenesku, V., Stenesku, S.).

ZMIYEVA, Yelena Stepanovna; SHASTIN, A.P., otv. red.; MINENKO, V.M., red.

[Forecasts of the inflow of water into the Kuybyshev and Volgograd Reservoirs] Prognozy pritoka vody k Kuibyshevskomu i Volgogradskomu vodokhranilishcham. Moskva, Gidrometeoizdat, 1964. 255 p. (MIRA 17:12)

KOSTYANITSYN, Mikhail Nikolayevich; NIKIFOROV, Ya.D., kand. tekhn. nauk, nauchn.red.; MINENKO,V.M.,red.

[Hydrology of the estuary region of the Dnieper and Southern Bug] Gidrologiia ust'evoi oblasti Dnepra i IU.Buga. Moskva, Gidrometeoizdat, 1964. 334 p. (MIRA 18:3)

ROGOV, Mikhail Mikhaylovich, kand. geogr. nauk, st. nauchn. sotr.; ROMASHIN, Vladimir Vladimirovich, st. inzh.-gidrolog; SHTEYNBAKH, Boris Vladimirovich; MIKHAYLOV, V.N., red.; MINENKO, V.M., red.

[Hydrology of the estuary area of the Western Dvina] Gidrologiia ust'evoi oblasti Zapadnoi Dviny. Moskva, Gidrometeoizdat, 1964. 348 p. (MIRA 17:12)

1. Gosudarstvennyy okeanograficheskiy institut (for Rogov). 2. Nachal'nik Rizhskoy ust'yevoy gidrometeostantsii (for Shteynbakh). 3. Rizhskaya ust'yevaya gidrometeostantsiya (for Romashin).

ZOTIN, M.I., st. nauchn. sotr.; SEREBRYAKOV, A.V., mlad. naucnn. sotr.; ALPATOVA, T.A., mlad. nauchn. sotr.; SEZEMAN, N.A., mlad. nauchn. sotr.; KRIVONOGOV, M.S.; ZHILOI, M.; PREBYSHEVSKAYA, M.M.; SEDELKOV, V.A., inzh.; MINENKO, V.M., red.

[Hydrology of the estuary region of the Northern Dvina] Gidrologiia ust'evoi oblasti Severnoi Dviny. Moskva, Gidrometeoizdat, 1965. 375 p. (MIRA 18:8)

1. Moscow. Gosudarstvennyy okeanograficheskiy institut. 2. Gosudarstvennyy okeanograficheskiy institut, Moskva (for Zotin, Serebryakov, Alpatova, Sezeman). 3. Nachal'nik gidrokhimicheskoy laboratorii Severnogo upravleniya gidrometeorologicheskoy sluzhby (for Prebyshevskaya). 4. Nachal'nik Severo-Dvinskoy ust'yevoy stantsii (for Krivonogov). 5. Severo-Dvinskaya ust'yevaya stantsiya (for Sedelkov).

L 28031-66 EWI(m)/EIC(f)/EPF(n)-2/EWG(m)

ACC NR: AP5026442 SOURCE CODE: UR/0089/65/019/004/0360/0367

AUTHOR: Kucherov, R. Ya.; Minenko, V. P.

ORG: None

TITLE: Theory of multicomponent isotope separation in cascades

SOURCE: Atomnaya energiya, v. 19, no. 4, 1965, 360-367

TOPIC TAGS: radioisotope, isotope separation

ABSTRACT: A theoretical study was made of cascades for multicomponent isotopic mixtures consisting of XY molecules. It was assumed that the elements X and Y were different. The cascades of an arbitrary distribution flow rate profile L(s) were considered and a transfer equation system was derived. The isotopic exchange rate v was formulated for two (zero and infinite) limiting cases. This rate was expressed, as follows:

$$v = \left| \frac{N_{mn}(0) - N_{mn}(l_0)}{N_{mn}(l_0) - e_m y_n} \right| \quad (1)$$

Where N_{mn} is the molar concentration of the X^mY^n components and x_m and y_n denote respectively the molar fractions of isotopes. Then, the equations for the zero and infinite cases were derived and presented in the following forms:

UDC: 621.039.31

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Zero case:

$$\frac{dN_m(s)}{ds} = N_m(s)\sum_{n=1}^{k} c_{mn}N_n(s) - \frac{2}{L^b(s)}\sum_{r=b}^{B}\times \times \{P^r[N_m(\sigma^r) - N_m(s)] - F^r[\tilde{N}_m(\sigma^r) - N_m(s)]\}. \quad (2)$$

Infinite case:

$$\frac{dN_{mn}}{ds} = N_{mn}\sum_{ij}(\varepsilon_{ij}^{mj} + \varepsilon_{ij}^{in})N_{ij} - \frac{2}{L^b}\sum_{r}\times \times \{P^r[x_m\gamma_n\sigma^r) + \gamma_n x_m(\sigma^r) - 2N_{mn}] - F^r[x_m\tilde{\gamma}_n(\sigma^r) + \gamma_n x_m(\sigma^r) - 2N_{mn}]\}. \quad (3)$$

Here the total number of cascade stages was denoted by B, while b represented the ordinal number of each individual stage. Each stage consisted of [illegible] separative steps connected in series and individually numbered by s. The letters Pr and Fr denoted the cascade product and cascade feed. The symbol ε_{mn} was a substitute for the equation $\varepsilon_{mn} = \frac{\delta N_m}{N_m} - \frac{\delta N_n}{N_n}$.

Then, the zero-case equation was used for further transformations and for obtaining the equation of transfer. In its general form, this equation represented an integral equation of Volterra type and was expressed as follows:

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$$\varphi_n(\varepsilon)+\frac{1}{L(\varepsilon)}\int_0^{\varepsilon}\varphi_n(t)\sum_{m=1}^{k}\beta_m\exp c_{mn}(\varepsilon-t)\cdot dt=$$
$$=\frac{1}{L(\varepsilon)}\sum_{m=1}^{k}x_{m0}\exp c_{mn}\varepsilon. \qquad (4)$$

After deriving general formulas and equations, the authors applied their analysis to the cascade of a rectangular stage configuration. The Laplacian transformation was used and the calculation procedure was presented. The final formula for the concentration component N_m was expressed as:

$$N_m(\varepsilon)=-c_m^b\sum_j\frac{x_j^b(\varepsilon)}{\varphi_{mj}^b}\left(\sum_j x_j^b(\varepsilon)\right)^{-1}. \qquad (5)$$

In conclusion, it was mentioned that this method was applied to the calculation of cascades for the separation of oxygen isotopes by means of a low-temperature distillation of nitrogen oxide. A computing machine "Ural-1" was used for calculations. The authors express their gratitude to I. G. Gverdtsiteli and Yu. V. Nikolayev for discussing the results of the work. Orig. art. has: 72 formulas.

SUB CODE: 18 / SUBM DATE: 10Mar65 / ORIG REF: 000 / OTH REF: 006

Card 3/3

Minenko, Yu.

107-57-6-37/57

AUTHOR: Dzhakoniya, V., and Minenko, Yu. (Leningrad)

TITLE: Color Television (Tsvetnoye televideniye)

PERIODICAL: Radio, 1957, Nr 6, pp 40-44 (USSR)

ABSTRACT: A short description of the NTSC compatible color television is given. "This system is usually called NTSC in foreign literature." A few color principles are set forth, and transmitting and receiving color TV systems are described in some detail. NTSC means National Television System Committee (USA).

There are ten figures in the article.

AVAILABLE: Library of Congress

Card 1/1

AKSENTOV, Yu.V.; VEREVKIN, N.S.; ZHEBEL', B.G.; ZLOTNIKOV, S.A.; KOLIN, K.T.; KONDRAT'YEV, A.G.; MINENKO, Yu.G.; OSNOL'KO, V.V.; TARANETS, D.A.; SHMAKOV, P.V., red.; VENGRENYUK, L.I., red.; KARABILOVA, S.F., tekhn.red.

[Television; general course] Televidenie; obshchii kurs. Pod red. P.V.Shmakova. Moskva, Gos.izd-vo lit-ry po voprosam sviazi i radio, 1960. 391 p. (MIRA 13:12)
(Television)

KONDRAT'YEV, A.G.; MINENKO, Yu.G.

Outlook for the use of vidicons in low frame frequency television systems. Tekh.kino i telev. 4 no.7:63-67 Jl '60. (MIRA 13:7)

1. Kafedra televideniya Leningradskogo elektrotekhnicheskogo instituta svyazi.
(Television—Transmitters and transmission)

31845
S/194/61/000/010/082/082
D271/D301

6,7000

AUTHORS: Parfenov, Yu.A., Kopacheva, Yu.I., Goryachev, V.A., Minenko, Yu.G. and Mosolova, G.K.

TITLE: Apparatus for automatic measurement of crosstalk attenuation

PERIODICAL: Referativnyy zhurnal. Avtomatika i radioelektronika, no. 10, 1961, 2-3, abstract 10 L10 (Tr. nauchno-tekhn. konferentsii Leningr. elektrotekhn. in-ta svyazi, no. 1, L., 1961, 133-141)

TEXT: Measurement of near-end crosstalk attenuation in multi-pair local telephone cables is at present both labor-consuming and imperfect. In order to reduce time waste and improve the supervision of the condition of local cables, an apparatus was developed for automatic measurement of crosstalk attenuation which permits automatic detection of low crosstalk attenuation pairs. The capacity of the equipment is 200 x 2. The equipment is composed of:

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31845
S/194/61/000/010/082/082
D271/D301

Apparatus for automatic measurement...

a device for automatic selection of pairs and for signalling and an electronic level indicator. The apparatus operates in the following manner: a relay circuit connects a 800 c/s generator, + 3.0 neper level, one after another to all pairs which are the source of crosstalk; electronic level indicator is connected in sequence to all pairs subject to crosstalk; one by one, all combinations of pairs are explored. In the presence of a combination with reduced crosstalk attenuation the operation is blocked and the signalling system indicates numbers of the interfering and disturbed pairs; subsequently, crosstalk level is measured by a high resistance level indicator, and crosstalk attenuation is computed. Basic circuits of the parts of the system are shown and their principles of operation are described. [Abstracter's note: Complete translation]

4

Card 2/2

S/194/61/000/011/066/070
D271/D302

AUTHORS: Kondrat'yev, A.G., Lukin, M.I. and Minenko, Yu.G.

TITLE: Objective measurements of quality indices of television signals

PERIODICAL: Referativnyy zhurnal. Avtomatika i radioelektronika, no. 11, 1961, 26, abstract 11 K195 (Tr. nauchno-tekhn. konferentsii Leningr. elektrotekhn. in-ta svyazi, no. 2, L., 1961, 3-6)

TEXT: Report on the equipment for objective evaluation of picture quality which was developed in 1960 by the Television Department of the Leningrad Electrotechnical Telecommunications Institute. The equipment includes instruments for measuring the definition, signal-to-noise ratio, horizontal trailing, reflected signals, levels and non-linearity of the display. Instruments are in development for measuring the depth of the picture and contrast compression distortions. [Abstracter's note: Complete translation]

Card 1/1

L.6000

31085

S/187/61/000/012/002/004
D053/D112

AUTHOR: Minenko, Yu.G.

TITLE: Automatic measuring of the signal-to-noise ratio during television broadcasting

PERIODICAL: Tekhnika kino i televideniya, no. 12, 1961, 11-19

TEXT: A method and a device for automatic measuring of the signal-to-noise ratio during TV broadcasting are described. They were developed at the kafedra televideniya LEIS (Department of Television at the LEIS) and described in April - May 1960 at annual conferences of the VNTORiE im. A.S. Popova (VNTORiE im.A.S.Popov) in Moscow and Leningrad. In this method, the distribution of the spectral noise density is measured at three discrete points of the video frequency band and then integrated. The signal-to-noise ratio is then computed on the basis of the obtained integral noise and the signal strength. A simplified block diagram of the signal-to-noise ratiometer is illustrated in Fig.2. Its main component units are: (1) sync pulse limiter; (2) automatic level regulator; (3) weighting filter; (4) measuring unit for the video-signal amplitude; (5) calibrated pulse generator; (6) noise measuring unit at f_1 frequency; (7) noise measuring unit at f_2 frequency;

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(8) noise measuring unit at f_3 frequency; (9) time-selection signal generator; (10) mixer; (11) signal-to-noise ratio computer; and (12) indicator. Measurements can be conducted for video signals with and without sync pulses. A prototype of this meter assured continuous measurements for 8 hours after a 40-minute heating-up time. The stabilization of filament and plate voltages permits a voltage variation of the supply network from +5 to -10%. There are 10 figures and 10 references: 7 Soviet-bloc and 3 non-Soviet-bloc. The two English-language references are L.E.Weaver, Noise Level Measurement in Television, Wireless World, No.6,1960; D.Fink, Television Engineering Handbook, New York, 1957.

ASSOCIATION: Leningradskiy elektrotekhnicheskiy institut svyazi im. M.A. Bonch-Bruyevicha (Leningrad Electrotechnical Institute of Communications im. Bonch-Bruyevich).

AKSENTOV, Yu.V.; GOL'DIN, A.A.; DZHAKONIYA, V.Ye.; DUSHKEVICH, N.I.; YERGANZHIYEV, N.A.; YEFIMKIN, V.I.; LIPAY, I.N.; MINENKO, Yu.G.; ODNOL'KO, V.V.; PEREVEZENTSEV, L.T.; TARANETS, D.A.; SHMAKOV, P.V., prof.; KUKOLEVA, T.V., red.; BELYAYEVA, V.V., tekhn. red.

[Theory and practice of color television]Teoriia i praktika tsvetnogo televideniia. Moskva, Sovetskoe radio, 1962. 661 p. (MIRA 16:1)

(Color television)

MINENKOV, A.N., inzh.; SIL'CHENKOVA, E.P., inzh.

Accounting system based on forms for the output and wages at the Moscow Computer and Analyzer Plant. Mekh.i avtom.proizv. 16 no.8:44-45 Ag '62. (MIRA 15:9)
(Moscow--Calculating machines--Accounting)

MINENKOV, B., inzh., master sporta.

Electric tensiometry and sports. Tekh.mol. 29 no.3:24 '61.
(MIRA 14:3)
(Sports—Equipment and supplies) (Tensiometers)

S/145/60/000/008/003/008
D211/D304

AUTHOR: Minenkov, B.V., Assistant

TITLE: Design of an inhomogeneous beam for strength and rigidity

PERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy. Mashinostroyeniye, no. 8, 1960, 68 - 76

TEXT: The author considers the torsion of an inhomogeneous beam under the following assumptions: 1) The beam has circular cross section; 2) The layers of material with different values of the shear modulus G are situated concentrically and do not glide on each other; 3) The hypothesis of plane cross sections and straight-line radii is valid; 4) Small elastic deformations and Hooke's law are observed. Expressions for the stresses and the torsional angle are deduced. Pure bending of an inhomogeneous beam is considered assuming that 1) The cross section is symmetrical with respect to the plane of bending; 2) The layers of material with different moduli of elasticity are situated in an arbitrary manner in the cross-section and

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do not glide on each other; 3) The hypothesis of plane cross sections is valid; 4) Hooke's law is valid; 5) Poisson's coefficient μ is the same for the whole beam. The differential equation of the bent axis of the beam is deduced. There are 5 figures and 2 Soviet-bloc references.

ASSOCIATION: MVTU im. N.E. Baumana (MVTU im. N.E. Bauman)

SUBMITTED: April 21, 1959

MINENKOV, B.V., inzh.

Experiment in determining the strength safety factor of sport, racing, and slalom skis. Der. prom. 10 no.8:14-15 Ag '61.
(Skis and skiing) (MIRA 14:8)

MINENKOV, B.V., inzh.

Machine for automatic recording of the ski deflection diagram. Der.prom. 11 no.6:14 Je '62. (MIRA 15:6)
(Skis and skiing) (Testing machines)

ACCESSION NR: AP3004620 S/0145/63/000/003/0051/0057

AUTHOR: Minenkov, B. V. (Assistant)

TITLE: Application of technical hypotheses for recording creep in plastics

SOURCE: IVUZ. Mashinostroyeniye, no. 3, 1963, 51-57

TOPIC TAGS: creep hypothesis, isotropic thermoplastic, tension relaxation curve, plastic, single axis elongation

ABSTRACT: The possibility of using analytical creep hypotheses to record the time-behavior of several isotropic thermoplastics has been considered. The first is a power law aging expression of the type

$$\varepsilon_n = \sigma^n \cdot \Omega, \qquad (1)$$

where n - creep deformation; σ - stress; Ω - a function of time and temperature. For n = 1.76 this formula is compared to experimental data. The second is the Davis formula given by

$$\dot{\varepsilon}_n \cdot \sigma_n^a = c \cdot \sigma^b \qquad (2)$$

where a, b, c are coefficients depending on type and temperature of the material. The tension relaxation curve at t = 20C from this expression is also compared to

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ACCESSION NR: AP3004620

experimental creep results in two types of plastics. The experimental results show good agreement with these formulas. The author concludes that under conditions of single-axis elongation the application of the above theories are justified for thermoplastics. Orig. art. has: 7 figures, 5 formulas, and 2 tables.

ASSOCIATION: MVTU im. N. E. Baumana (MVTU)

SUBMITTED: 06Dec62 DATE ACQ: 15Aug63 ENCL: 00

SUB CODE: ML NO REF SOV: 003 OTHER: 000

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ACCESSION NR: AP4045023 S/0191/64/000/009/0038/0041

AUTHOR: Minenkov, B. V., Slyudikova, N. N.

TITLE: Effect of stabilizing additives on the creep and relaxation of Kapron

SOURCE: Plasticheskiye massy*, no. 9, 1964, 38-41

TOPIC TAGS: friction, abrasion, lubricant, filler, barium sulfate, cadmium iodide, tensile strength, elongation, elastic modulus, creep, thermoplast, relaxation, polycaprolactam, Kapron

ABSTRACT: The effect of different fillers, such as barium sulfate and cadmium iodide, on the physico-mechanical properties of Kapron test samples was investigated at 20 C and 55% relative humidity. The following compositions were used in the experiments: pure Kapron (polycaprolactam); Kapron + 3% CdI_2, Kapron + 20% $BaSO_4$ and Kapron + 20% BaS + 3% CdI_2 molded at 270-280 C and 1000-1200 kgs/cm^2 pressure for 30 sec. The tensile strength and compressibility were measured at a rate of deformation $\varepsilon = 0.1\%$ min. The extension-compression curves show that the addition of CdI_2 decreased the elongation at break of pure Kapron by almost 60% and increased the strength by 15%; 20% $BaSO_4$ also decreased the elongation at the break and slightly increased the strength. In both cases,

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ACCESSION NR: AP4045023

the modulus of elasticity increased by 23-25%. For all compositions, there was a linear correlation between stress and strain at the given experimental rate, up to 400-500 kgs/cm^2. Under stresses up to 300 kgs/cm^2, relaxation began 40-50 sec. after removal of the load. The compressibility of all the materials was practically the same. The mechanical properties of the test samples under a short-term load are tabulated. Creep curves showed the highest creep for pure Kapron; 3% CdI_2 + 20% $BaSO_4$ decreased the creep of pure Kapron by 50%. When stress relaxation was determined for 500 hours at an initial load of 150 or 100 kgs/cm^2, addition of 20% $BaSO_4$ and 3% CdI_2 decreased the relaxation of pure Kapron by 30%. A comparison showed that the joint effect of these two components decreased not only the relaxation of pure Kapron but also equalized its flow. This is an essential factor in the determination of the serviceability of Kapron products. The permanent characteristics of Kapron are thus improved slightly by additives. The relationship between the stress ratio and the creep rate ratio at 20 C is shown in the Enclosure. Orig. art. has: 5 figures, 1 table and 3 formulas.

ASSOCIATION: None

SUB CODE: MT

SUBMITTED: 00 ENCL: 01

NO REF SOV: 003 OTHER: 000

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ACCESSION NR: AP4045023

ENCLOSURE: 01

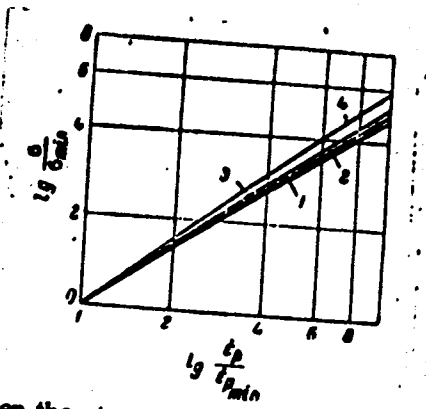

Fig. 1 - Relationship between the stress ratio and the creep rate ratio at 20°C:
1 - pure Kapron, n = 1.5; 2 - Kapron + 3% CdI_2, n = 1.40;
3 - Kapron + 20% $BaSO_4$, n = 1.43;
4 - Kapron + 20% $BaSO_4$ + 3% CdI_2, n = 1.28.

Card 3/3

MINENKOV, B.V.; ARKIN, Ya.G.

Selecting the optimum design of sports racing skis. Der. prom. 15 no.1:11-13 Ja '66. (MIRA 19:1)

1. TSentral'noye opytno-konstruktorskoye byuro sportivnogo oborudovaniya i inventarya.

POGREBTSOV, B., kand. tekhn. nauk (Novocherkassk); [illegible], inzh. (Novocherkassk)

Device for locating welded joints in steel wire. Radio no.1: 43 Ja '66. (MIRA 19:1)

MIKHNKOV, Igor' Borisovich; IOFIS, Ye.A., kandidat tekhnicheskikh nauk, redaktor; TSLMSHEV, A.N., redaktor; VOLYNTSEVA, V., tekhnicheskiy redaktor

[Photographic reproductions] Reproduktsionnaia fotos"emka. Pod obshchei red. E.A. Iofisa. Moskva, Gos. izd-vo "Iskusstvo," 1955. 70 p. (Biblioteka fotoliubitelia, no.6) [Microfilm] (MLRA 9:1)
(Photography--Reproduction of plans, drawings, etc.)

MINENKOV, I.B.

Some aspects of macrophotography. Zhur. nauch. i prikl. fot. i kin. 1 no.6:446-454 N-D '56. (MLRA 10:2)

1. Moskovskiy gosudarstvennyy universitet imeni M.V. Lomonosova, Kafedra uchebnoy i nauchnoy fotografii i kinematografii.
(Photography--Enlarging)

MINENKOV, I.

Photomicography. Sov.foto 18 no.12:44-47 D '58. (MIRA 11:12)
(Photomicography)

MINENKOV, Igor' Borisovich; IOFIS, Ye.A., kand.tekhn.nauk, obshchiy red.; [illegible], A.N., red.; SHKBALINA, G.Ya., tekhn.red.

[Reproduction photography] Reproduktsionnaia fotos"emka. Izd.2., ispr. i dop. Pod obshchei red. E.A.Iofisa. Moskva, Gos.izd-vo "Iskusstvo," 1959. 109 p. (Biblioteka fotoliubitelia, no.6) (MIRA 12:9)

(Photography--Reproduction of plans, drawings, etc.)

MIMENKOV, I.

Program of photography clubs for beginners. Sov.foto. 19 no.1:44-46 Ja '59. (MIRA 12:3)

1. Starshiy prepodavatel' kafedry nauchnoy fotografii Moskovskogo gosudarstvennogo universiteta im. M. V. Lomonosova.
(Photography--Societies, etc.)

MIRENKOV, I.

Systematic instructions for a program in photographic clubs for beginners. Sov. foto 19 no.2:26-30 F '59. (MIRA 12:3)
(Photography--Societies, etc.)

PHASE I BOOK EXPLOITATION SOV/4545

Minenkov, Igor' Borisovich

Makrofotografiya (Macrophotography) Moscow, Gos. izd-vo "Iskusstvo," 1960. 175 p. Errata slip inserted. 10,000 copies printed.

Ed.: A.N. Teleshev; Tech. Ed.: A.N. Chicherin.

PURPOSE: This book is intended for the personnel of scientific and technical photographic laboratories and for advanced amateur photographers.

COVERAGE: The book discusses a complex of macrophotographic problems and methods. Special features of macrophotography equipment, and techniques are described. The purpose of macrophotography and its many applications to the fields in which neither microphotography nor (conventional) photography can fulfill the requirements of scientists or investigators are given. Instances, in which it is difficult to differentiate between macrophography and microphotography, are discussed. Data on Soviet objectives and equipment used in macrophotography are listed. No personalities are mentioned. There are 18 references: 13 Soviet (2 translations), 4 German, and 1 Czech.

Card 1/5

BARINOV, L.V.; GEODAKOV, A.I.; GRINEVICH, G.Ya.; IOFIS, Ye.A., kand. tekhn. nauk; KRIMERMAN, P.M.; LAPAURI, A.A.; MINENKOV, I.B.; PANFILOV, N.D.; PELL', V.G., kand. tekhn. nauk; PERTSIK, A.G.; POLYANSKIY, N.N.; POPOV, A.N.; SIMONOV, A.G.; SUROV, S.G.; SHASHLOV, B.A.; TELESHEV, A.N., red.; MALEK, Z.N., tekhn. red.

[Manual for the amateur-photographer] Spravochnik fotoliubitelia. Pod obshchei red. E.A.Iofisa i V.G.Pellia. Moskva, Iskusstvo, 1961. 530 p. (MIRA 15:7)
(Photography--Handbooks, manuals, etc.)

MINENKOV, I.

Slides and filmstrips. Sov.foto 22 no.9:32-34 S '62.
(MIRA 15:8)
(Filmstrips)

POGREBTSOV, B.Ya.; MINENKOV, I.I.

Using a generator with a bypass diode to determine the thickness of the zinc covering of a steel wire. Trudy NPI 137:37-46 '62. (MIRA 16:10)

MINENKOV, V.V.

A method of studying the geometrical layout of a building and a tower crane in the erection of residential and public buildings. Trudy NPI 125:9-18 '61. (MIRA 15:7)
(Cranes, derricks, etc.) (Building)

MINENKOV, V.V.

Nomograms for choosing tower cranes by geometrical parameters in the erection of residential and public buildings. Trudy NPI 125:43-49 '61. (MIRA 15:7)
(Cranes, derricks, etc.) (Building)

MINENKOV, V.V.

Selection of a boom for an erecting crane. Trudy NPI 144:55-67 '63. (MIRA 17:8)

MINENKOV, V.V.

Weight relationships of precast elements of apartment houses during the assembling by arm cranes. Trudy NPI 145:29-39 '64.

(MIRA 18:12)

BORISOVA, N.B.; GLADKIY, M.F.; MINENKOVA, V., red.

[Winter rape for feed] Ozimyi raps na korm. Moskva, Kolos, 1965. 58 p. (MIRA 18:8)

AGAPOV, Andrey Fedorovich; MINKEKOVA, V.I., red.; SERGEYEV, V.I., red.; ZUBRILINA, Z.P., tekhn. red.

[High tomato yields] Vysokie urozhai pomidorov. Moskva, Gos. izd-vo sel'khoz. lit-ry, 1960. 117 p. (MIRA 14:5)
(Tomatoes)

POLYNSKIY, Pavel Aleksandrovich; MINENKOVA, V.R., red.; BALLOD, A.I., tekhn.red.

Evgeniia Doliniuk. Moskva, Gos.izd-vo sel'khoz.lit-ry, 1960. 111 p. (MIRA 14:1)
(Doliniuk, Evgeniia Alekseevna)

VIKHLYAYEV, I.I., prof.; OLENIN, A.S., kand.tekhn.nauk; RUMOV, D.I., inzh.; TEREGULOV, I.Kh., inzh.; FATCHIKHINA, O.Ye., kand.sel'skokhoz.nauk; SHISHKOV, K.N., kand.sel'skokhoz.nauk; MINENKOVA, V.R., red.; BALLOD, A.I., tekhn.red.

[Manual on peat] Spravochnik po torfu. Moskva, Gos.izd-vo sel'khoz. lit-ry, 1960. 318 p. (MIRA 14:2)
(Peat)

VOLKOV, Aleksandr Nikolayevich; GERASIMOV, B.A.; ZARING, P.V.; MUSHNIKOVA, K.S.; NIKIFOROV, A.M.; PROKOPENKO, S.F.; POPOV, S.D.; CHUVAKHIN, V.S.; MINENKOVA, V.R., red.; GOR', Z.D., tekhn.red.; GUREVICH, M.M., tekhn.red.

[Manual on controlling pests and diseases of farm crops] Posobie po bor'be s vreditelíami i boleznìami sel'skokhoziaistvennykh kul'tur. Izd.10, ispr. i dop. Moskva, Gos.izd-vo sel'khoz.lit-ry, 1960. 615 p. (MIRA 13:11)
(Agricultural pests) (Plant diseases)

YAKHTENFEL'D, Pavel Aleksandrovich; MINENKOVA, V.R., red.; GUREVICH, M.M., tekhn. red.

[Cultivation of spring wheat in Siberia] Kul'tura iarovoi pshenitsy v Sibiri. Moskva, Izd-vo sel'khoz. lit-ry, zhurnalov i plakatov, 1961. 359 p. (MIRA 15:2)
(Siberia—Wheat)

KOTT, Stepan Alekseyevich, doktor sel'khoz. nauk; MINENKOVA, V.R., red.; GOR'KOVA, Z.D., tekhn. red.; TRUKHINA, O.N., tekhn. red.

[Weeds and weed control] Sornye rasteniia i bor'ba s nimi. 3., izd. perer. i dop. Moskva, Gos. izd-vo sel'khoz. lit-ry, zhurnalov i plakatov, 1961. 364 p. (MIRA 14:10)
(Weeds) (Weed control)

ZAKHARCHENKO, A.L.; DEMCHENKO, P.V.; YAKUKHINA, A.F.; SOLOV'YEV, B.F.; KINSH, A.S.; MINENKOVA, V.R., red.; PEVZNER, V.P., tekhn. red.; TRUKHINA, O.N., tekhn. red.

[Reference book on corn]Spravochnik po kukuruze. Moskva, Sel'khozizdat, 1962. 519 p. (MIRA 16:4)
(Corn (Maize))

KOREN'KOV, D.A., kand. sel'khoz. nauk; MIKHAYLOV, N.N., kand. sel'-khoz. nauk; MINENKOVA, V.P., red.; BELOVA, N.N., tekhn. red.

[Store fertilizers carefully and use them properly] Bereshno khranit' i pravil'no ispol'zovat' udobreniia. Moskva, Sel'khozizdat, 1963. 127 p. (MIRA 16:8)
(Fertilizers and manures)

ZUBENKO, V.Kh., kand. sel'khoz.nauk; MINENKOVA, V.R., red.; OKOLELOVA, Z.P., tekhn. red.

[Corn in postharvest and stubble plantings] Kukuruza v poukosnykh i pozhnivnykh posevakh. Moskva, Sel'khozizdat, 1963. 158 p. (MIRA 17:1)

ALEKSEYEVA, Ye.I., kand. sel'khoz. nauk; BUZINOV, P.A., kand. sel'khoz. nauk; VODOLAGIN, V.D.; VOLKHOVSKAYA, U.V.; GLUSHCHENKO, N.N., kand. biol. nauk; GURVICH, N.L., doktor biol. nauk; ZHELEZNOV, P.A., kand. sel'khoz. nauk; KSENDZ, A.T.; LESHCHUK, T.Ya.; LUK'YANOV, I.A., kand. sel'khoz. nauk; MAYCHENKO, Z.G., kand. sel'khoz. nauk; TANASIYENKO, F.S., kand. khim. nauk; ZNAMENSKIY, M.P.; PERSIDSKAYA, K.G.; PODLESNOVA, A.F.; ROGOCHIY, I.Ya.; REZNIKOV, A.R.; SHUL'GIN, G.T.; KHOTIN, A.A., doktor sel'khoz. nauk; LAPSHINA, O.V., red.; MINENKOVA, V.R., red.; MAKHOVA, N.N., tekhn. red.; BALLOD, A.I., tekhn. red.

[Aromatic plants] Efiromaslichnye kul'tury. Moskva, Sel'-khozizdat, 1963. 358 p. (MIRA 16:12)
(Ukraine--Aromatic plants)

TREPACHEV, Ye.P., kand. sel'khoz. nauk; MINENKOVA, V.R., red.; TRUKHINA, O.N., tekhn. red.

[Corn as a monocultural crop] Kukuruza na postoiannykh poliakh. Moskva, Sel'khozizdat, 1963. 85 p. (MIRA 17:3)

PANNIKOV, V.D., prof.; MINENKOVA, V.R., red.

[Soils, fertilizers, and crops] Pochvy, udobreniia i urozhai. Moskva, Izd-vo "Kolos," 1964. 335 p. (MIRA 17:5)

KOZHUSHKO, V[illegible], doktor sel'khoz. nauk, laureat Leninskoy premii; MIRENKOVA, V.R., red.

[Corn breeding] Selektsiia kukuruzy. Moskva, Kolos, 1965. 205 p. (MIRA 18:8)

NOVIKOV, A.Ye.; TASHCHEV, Ye.N.; MINENKOVA, V.R., red.; SHLEPANOV, V.M., red.

[Work experience of agricultural technical schools; some problems of theoretical and industrial training] Iz opyta raboty sel'skokhoziaistvennykh tekhnikumov; nekotorye voprosy teoreticheskogo i proizvodstvennogo obucheniia. Moskva, Kolos, 1964. 220 p. (MIRA 19:1)

MINENKOVA, Ye.A.; VERMEL', Ya.M.

Chemotherapy of tumors of the adrenal cortex; preparation DDD. Vop. onk. 11 no.10:106-113 '65. (MIRA 18:10

1. Vsesoyuznyy institut nauchnoy i tekhnicheskoy informatsii AN SSSR.

MIKENOK, P.M., inzh.

Expedition ship "Mikhail Lomonosov." Sudostroenie 25 no.5:4-7 My '59. (MIRA 12:8)
(Ships)

MINENOK, P.M.

Pusher tugs for the Danube River. Sudostroenie no.8:13-16 Ag '65. (MIRA 18:9)

MINERAVIN, S.M.; ZHAK, S.P.

Observations on specific therapy of mixed experimental infection caused by Clostridium perfringens and oedematiens. Zhur. mikrobiol. epid. i immun. 41 no.3:114-118 Mr '64. (MIRA 17:11)

1. Odesskiy meditsinskiy institut imeni Pirogova.

MINERVIN, A. B., Candidate Phys-Math Sci (diss) -- "Theoretical investigation of electron capture in acceleration in betatrons and synchrotrons with betatron starting". Moscow, 1959. 7 pp (Acad Sci USSR, Phys Inst im P. N. Lebedev), 150 copies (KL, No 24, 1959, 126)

21(9)

AUTHORS: Ryazin, P. A., Minervin, A. B. SOV/89-6-1-10/33

TITLE: The Investigation of the Capture of Electrons Under the Conditions of Acceleration in Betatrons and Synchrotrons (K issledovaniyu zakhvata elektronov v rezhim uskoreniya v betatronakh i sinkhrotronakh)

PERIODICAL: Atomnaya energiya, 1959, Vol 6, Nr 1, pp 68 - 69 (USSR)

ABSTRACT: The problem of electron capture during acceleration is theoretically investigated, and a non-contradictory solution of the many-electron problem is derived in consideration of the boundary and initial conditions. By means of the derived formulae it is possible to determine the coordinates of the electrons and fluxes in the vacuum chamber of the accelerator. By means of the iteration method it is further possible to calculate the non-steady fluxes in the chamber and to give all other fundamental parameters of the accelerator. If J = 0 (electron flux in the chamber) the equation of the single-electron theory is obtained, which is applicable also in the case of low emission currents In the case of high emission currents the mechanism of collective interaction is the decisive factor. Capture

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takes place both on the front and on the rear of the impulse. Between these two there is a difference which still remains to be explained.
If an internal electron feed is used, capture on the front is equal to capture on the rear part of the impulse in the case of external feed. This relation is reciprocal.
A more detailed description of the theory of accurate and approximated solution methods for the characteristic properties of a betatron is in preparation.

SUBMITTED: February 10, 1958

21,2100

69160

B/139/59/000/06/017/034

E032/E114

AUTHORS: Ryazin, P.A., and Minervin, A.B.

TITLE: On the Capture of Electrons into the Acceleration Process in Betatrons and Synchrotrons

PERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy, Fizika, 1959, Nr 6, pp 112-123 (USSR)

ABSTRACT: This paper was presented at the Inter-Collegiate Conference on Accelerators (Tomsk, February, 1958). Self-consistent solution of the many-electron problem is sought subject to boundary and initial conditions. The intensity of the axially symmetric magnetic field during the time of admission and the injection voltage are taken as the initial conditions, and collisions of electrons with the rear wall of the injector, and with the walls of the chamber, as the boundary conditions. Among the factors which influence the capture process, the theory considers adiabatic contraction of electronic orbits due to the growth of the magnetic field, the effect of self-induction of the non-steady current in the chamber, and the effect of the Coulomb interaction between electrons which leads both to a reduction in the amplitude of betatron oscillations and to the displacement of

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S/139/59/000/06/017/034
E032/E114

On the Capture of Electrons into the Acceleration Process in Betatrons and Synchrotrons

instantaneous orbits. The expressions obtained may be used to calculate current pulses in the chamber, and betatron characteristics under different working conditions. The theory gives both qualitative and quantitative explanation of processes which take place during the capture both on the leading and the trailing edges of the injection pulse, as well as on its flat part. The equations of motion are solved taking into account all the above effects. The capture mechanism is dependent on the Coulomb interaction and the collective interaction. The latter effect is described by three terms, the first of which describes the reduction in the amplitude of betatron oscillations during the decrease in the total non-stationary current in the chamber; the second describes the contraction of the orbits due to the latter decrease which is the result of a weakening in the radial repulsive forces in the space charge; and, finally, the third term describes the effect of self-induction in the beam during the capture process.

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E032/E114

On the Capture of Electrons into the Acceleration Process in Betatrons and Synchrotrons

Acknowledgements are made to S.N. Stolyarov and A.V. Uspenskiy, and to B.M. Drozdov's section of the Computing Centre of the Academy of Sciences, USSR.
There are 6 figures.

ASSOCIATION: Fizicheskiy institut imeni P.N. Lebedeva AN SSSR (Institute of Physics imeni P.N. Lebedev, Academy of Sciences, USSR)

SUBMITTED: December 27, 1958

Card 3/3

MINERKIN, A. B.

21 (0), 24 (0)

AUTHOR: Tyagunov, G. A. SOV/89-7-2-18/24

TITLE: Scientific Conference of the MIFI (Nauchnaya konferentsiya MIFI)

PERIODICAL: Atomnaya energiya, 1959, Vol 7, Nr 2, pp 176-177 (USSR)

ABSTRACT: The yearly scientific meeting was held from 17 April to 15 May
1959 in the Moskovskiy inzhenerno-fizicheskiy institut (Moscow
Physical Engineering Institute). More than 600 participants from
100 different institutes attended the 2 plenary and 18 sectional
conferences. A total of 148 lectures were held. The following
lectures are specially mentioned: M. K. Romanovskiy on
the thermo-nuclear examinations, N. G. Basov on the
physical foundations of molecular generators and amplifiers,
A. I. Leypunskiy on the construction of a fast reactor, I. Ya.
Pomeranchuk on the theory of the peripheral collision of mesons
and nucleons, A. B. Migdal on superfluidity and momentum of
inertia of the nuclei. A. S. Kompaneyets on the strong electromagnetic
gravity wave, V. I. Gol'danskiy on levels which are excited within
the nucleus shell and methods of comprehending them, L. L.
Rozental' and L. A. Prokhorova on the analysis of the possible
experiments for the determination of the measurements of the
μ-mesons, L. L. Dianov-Klokov on the spectrum of liquid and
crystalline hydrogen under pressure (8000-10000 atm) and an
instrument for measuring the absorption curves, Y. A.
Lyapidevskiy and O. V. Glazardina on new application possibilities
of the diffusion chamber, A. V. Shal'nov on calculation methods
for linear electron accelerators with migratory waves, P. A.
Ryazin, A. D. Minervin and A. I. Zaboyev on new theories of the
electron capture under betatron conditions of the acceleration,
Ya. G. Pratnov on optimum wave length for a generator, S. P.
Lomnev and G. A. Tyagunov on magnetic focusing in a linear
electron accelerator, O. A. Val'dner, P. A. Dmitrovskiy, D. ...
Zorin, Yu. V. Klein on the 3 new linear accelerators of the MIFI,
and V. V. Kuznetskiy, O. A. Val'dner, V. V. Kotov and Y. N.
Chesnokov on examination of the electron movement in the system
of the elutron with consideration of the scattering fields, O. A.
Krayev on impulse method for measuring the heat conduction
capacity of liquids and the theory of this method, Ya. G.
Khabakhpashev, Yu. V. Il'in and D. A. Chirov on heat transmission
to the eutectic Na-K which flows in a circular space, V. I.
Petrovichev on heat transmission to circulating mercury, V. K.
Royzin on special conditions when working with a flat triode in
the impulse technique, O. S. Pofurayev on calculation methods and
construction of an impulse transformer for instruments with
semi-conductor elements, Ya. A. Khetagurov on a possibility
judge the characteristics of magnetic recording of impulses,
B. I. Kal'nin on the element system for a universal digital
computer, V. S. Malov on multiple control of the parameters of
technologic processes. P. I. Popov on analysis of several
systems with which physical energy apparatus can be automatically
started, Yu. I. Topchayev on a method to examine the quality of
a reactor control when the reactivity changes stepwise or
linearily. G. A. Leont'yev and A. I. Yevstyukhin on examination
of the iodine method of refining niobium and characteristics
of the metal obtained, P. L. Gruzin and G. G. Ryabova on
examination of the micro-distribution of carbon, tungsten, iron
and other elements in zirconium and its alloys by use of auto-
radiography, G. B. Fedorov on determination of the sublimation
heat of zirconium and nickel by using radioactive indicators
and G. B. Fedorov and A. M. Semenikhin on determination of the
diffusion coefficients of chromium, nickel, iron and chromium
nickel steels. The literature for all these lectures will be
published by the MIFI in a symposium.

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Card 3/3

MINERVIN, A.V.

Engineering geology characteristics of sedimentary cover rocks in the Tom'-Kolyvan' area. Nauch. dokl. vys. shkoly; geol.-geog. nauki no.3:178-184 '58. (MIRA 12:1)

1.Moskovskiy universitet, geologicheskiy fakul'tet, kafedra inzhenernoy geologii.
(Tom' Valley--Engineering geology)
(Ob' Valley--Engineering geology)

MINERVIN, A.V.; SERGEYEV, Ye.M.

Surface deposits in the right-bank area of the lower Ob' Valley. Vest.Mosk.un.Ser.biol., pochv., geol., geog. 13 no.3:143-150 '58. (MIRA 12:1)

1. Kafedra gruntovedeniya i inzhenernoy geologii Moskovskogo gos. universiteta.

(Ob' Valley--Rocks, Sedimentary)

MINERVIN, A.V.

Cover deposits of the second terrace above the flood plain on the left side of the Ob' Valley in the region between the mouth of the Irtysh River and the village Surgut. Vest.Mosk.un.Ser. biol.,pochv.,geol.,geog. 13 no.4:149-155 '58. (MIRA 12:4)

1. Kafedra gruntovedeniya i inzhenernoy geologii Moskovskogo universiteta.

(Ob' Valley--Soils)

AUTHOR: Minervin, A. V.

SOV/20-120-1-49/63

TITLE: On the Age and Genesis of the Covering Sediments of the Tom'-Kolyvan' Zone (O vozraste i genezise pokrovnykh otlozheniy Tom'-Kolyvanskoy zony)

PERIODICAL: Doklady Akademii nauk SSSR, 1958, Vol. 120, Nr 1, pp. 179-182 (USSR)

ABSTRACT: The question of the stratigraphical position and of the origin of the loess deposits of West-Siberia, which form the upper horizons of the river terraces and the cover of the watersheds and slopes, is not decided yet. From publications (Refs 4 and other ones) the difference of the opinions of some authors on this question can be seen. The results from field and laboratory work served as material for this communication. The main conclusion of the work forms the separation of some age and genetic varieties in the loess mass (table 1). They are:
a) Covering sediments from the Middle Pleistocene time. They lie upon typically alluvial and lake deposits of Middle Pleistocene age, which are faunally and paleobotanically characterized (Refs 1,2,5,6). b) Covering sediments from the Upper Pleistocene from the upper part of the covering complex. Ac-

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On the Age and Genesis of the Covering Sediments of the Tom'-Kolyvan' Zone SOV/20-120-1-49/63

cording to the mollusks collected by I. Vashkovskiy and the auth or (determination by A. G. Eberzin) these deposits can be regarded to have settled in large stagnant fresh water basins or in water-rich slowly flowing rivers. c) Redent covering sediments. To them belong eluvial and deluvial varieties. A mantle--like, apparently Pleistocene character of these sediments shows up especially well in the regions of the leaning of the upper river terraces to older watershed regions. The material described above shows that the covering sediments of the north--west wing of the Tom'-Kolyvanskaya zone are of different age, different according to their genesis, and show according to age and genesis certain lithological properties. Therefore no reason exists to speak about their origin in any equal way. There are 1 table and 6 Soviet references.

PRESENTED: January 10, 1958, by N. M. Strakhov, Member, Academy of Sciences, USSR

SUBMITTED: January 6, 1958

Card 2/3

On the Age and Genesis of the Covering Sediments of the Tom'-Kolyvan' Zone SOV/20-120-1-49/63

1. Geology--USSR 2. Sedimentation--Sampling 3. Geological time --Determination

Card 3/3

MINERVIN, A. V., Cand of Geol-Min Sci -- (diss) "Genesis and Engineer-Geological Characteristics of the Deposits of the Valley of the Ob River (In Its Middle and Lowre Course)," Moscow, 1959, 23 pp (Mos State Univ im L$_o$monosov) (KL, 1-60, 120)

SERGEYEV, Ye.M.; MINERVIN, A.V.

Nature of the process of loess formation in a Podzolic zone.
Vest.Mosk.un.Ser.4: Geol. 15 no.3:3-14 My-Je '60. (MIRA 13:8)

1. Kafedra gruntovedeniya i inzhenernoy geologii Moskovskogo universiteta.
(Podzol) (Loess)

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AUTHOR: Minervin, A.V.; Sergeyev, Ye.M.

TITLE: New data for solution of the loess problem

29

SOURCE: AN SSSR. Izvestiya. Seriya geologicheskaya, no. 9, 1964, 53-64

TOPIC TAGS: geology, loess, soil engineering, soil freezing

ABSTRACT: The authors review the principal hypotheses advanced to explain the origin of loess and point out that this problem has never been solved. Although the authors disclaim any intention of an exhaustive review of these hypotheses, they discuss two basic aspects of the loess problem in detail. First, the fact that all existing hypotheses meet with convincing criticism and that it is clear that there is still no well-substantiated hypothesis of loess origin. Second, they stress that in most definitions of loess there is emphasis on its subsidence (tendency to become compacted) as a typical property. The following three aspects of loess are then discussed critically: 1) Loess does not occur everywhere; 2) There is a definite relationship between loess and the underlying rocks; 3) Loess associated with a gradual transition from the underlying rocks seemingly inherits some of the characteristics